uFR Online pins and connectors description

Version 1.0
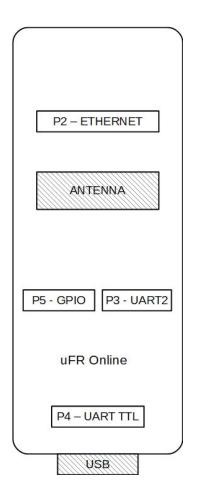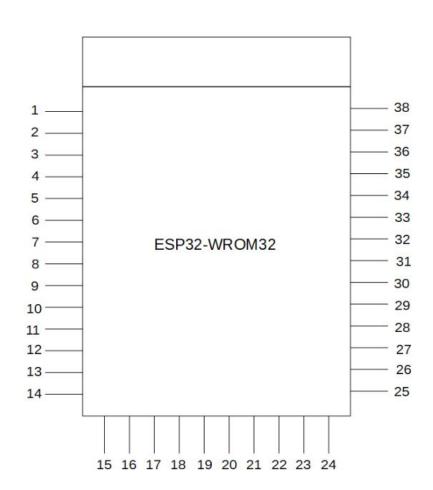
Table of contents

Connectors location and ESP32 pinout

P2 – ETHERNET

ANTENNA

P5 - GPIO   P3 - UART2

uFR Online

P4 – UART TTL

USB

1
2
3
4
5
6
7
8
9
10
11
12
13
14

ESP32-WROM32

38
37
36
35
34
33
32
31
30
29
28
27
26
25

15 16 17 18 19 20 21 22 23 24

Available pins

In table below is shown list of available pins on uFR Online.

User available uFR Online pins		
ESP32 Pin number	**GPIO**	**Description**
4	GPIO36	External input pin 1
5	GPIO39	External input pin 2
6	GPIO34	Connected to uFR reader TX
7	GPIO35	Connected to external UART TX
8	GPIO32	Connected to uFR reader reset
9	GPIO33	External input/output pin 3
13	GPIO13	Connected to internal RGB LED
24	GPIO2	External output pin 6
27	GPIO16	Connected to uFR reader RX
29	GPIO5	External input/output pin 4
30	GPIO18	External input/output pin 5
34	GPIO3	Connected to Serial to USB FTDI RX
35	GPIO1	Connected to Serial to USB FTDI TX
37	GPIO23	Connected to external UART RX

User programmable pins

In table below is shown list of user programmable pins on OEM unlocked uFR Online.

UART 1 - Internally connected to uFR Reader		
ESP32 Pin number	**GPIO**	**Description**
6	GPIO34	Connected to uFR Reader TX
8	GPIO32	Connected to uFR Reader reset
27	GPIO16	Connected to uFR reader RX

UART 2 - connected external P3 connector			
P3 Pin number	**ESP32 Pin number**	**GPIO**	**Description**
1	X	X	Connected to 3.3V power supply
2	7	GPIO35	Connected to external UART TX
3	37	GPIO23	Connected to external UART RX
4	8	GPIO32	Connected to uFR Reader reset
5	X	X	Connected to GND

Input/Output pins - connected external P5 connector			
P5 Pin number	**ESP32 Pin number**	**GPIO**	**Description**
1	4	GPIO36	External input pin 1
2	5	GPIO39	External input pin 2
3	9	GPIO33	External input/output pin 3
4	29	GPIO5	External input/output pin 4
5	30	GPIO18	External input/output pin 5
6	24	GPIO2	External output pin 6

Input/Output pins additional features

In table below is shown list of additional features available for Input/Output pins on OEM unlocked uFR Online.

Input/Output pins - additional features	
P5 Pin number	**List of features**
1	Deep sleep wake-up, ADC
2	Deep sleep wake-up, ADC
3	Deep sleep wake-up, ADC, Touch sensor, PWM, I2C
4	PWM, I2C
5	PWM, I2C
6	Deep sleep wake-up, ADC, Touch sensor, PWM, I2C

Non-programmable pins

In table below is shown list of pins that are internally conencted and not user programmable pins on OEM unlocked uFR Online.

External P4 connector. Only available on UART TTL version without USB connector	
P4 Pin number	**Description**
1	External 5V power supply
2	UART TX Pin
3	UART RX Pin
4	UART RTS Pin
5	GND
6	UART DTR Pin

External P2 connector. Only available on Ethernet version with dedicated LAN adapter.

Revision history

Date	Version	Comment
2019-07-15	1.0	Base document